# DEET Use and Safety

# **Wyoming Department of Health**

#### What is DEET and why is it recommended?

DEET (N,N-diethyl-m-toluamide) is the **most effective and best-studied** insect repellent available. DEET does not kill mosquitoes, it interferes with their ability to locate people. By wearing DEET, you can reduce your exposure to potentially serious viruses carried by mosquitoes such as West Nile virus and continue to play and work outdoors.

#### Are non-DEET repellents effective?

The Centers for Disease Control and Prevention (CDC) has stated that another insect repellent, Picaridin (KBR 3023), is also highly effective. Two other scientific studies have also suggested that oil of lemon eucalyptus, a plant based repellent, is also effective and provides protection similar to those products containing low concentrations of DEET. Permethrin is an extremely effective insecticide/repellent that can be used on clothing, shoes, bed nets, and camping gear, but should not be used on bare skin.

While many new products have been shown to provide some protection against mosquito bites, DEET has been the most studied and reliable mosquito repellent for personal use. Product labels should be consulted to determine the length of time that protection can be expected from a product.

#### Is DEET safe?

Yes, products containing DEET are considered to be safe when used according to the directions. Because DEET is so widely used, a great deal of testing has been done.

### How often should repellent containing DEET be reapplied?

Follow the directions on the product to determine how frequently you need to reapply repellent. Sweating or participating in water activities may mean that you need to reapply repellent more frequently. If you are not being bitten, it is not necessary to reapply repellent. Repellents containing a higher concentration of DEET (up to 50%) provide longer-lasting protection. Heavy application is not necessary to achieve protection.

### What are some general considerations to using products containing DEET safely?

- Always follow the recommendations on the product label.
- Use just enough repellent to cover exposed skin or clothing; do not apply to skin that is under clothing.
- Do not apply repellent to cuts, wounds, or irritated skin.
- After returning indoors, wash treated skin with soap and water.

- Do not spray aerosol or pump products in enclosed areas or near food or drink.
- Do not apply aerosol or pump products directly to your face. Spray your hands and then rub them carefully over the face, avoiding eyes and mouth.

#### Should I take special precautions when applying DEET to my child?

Serious illness has not been reported in children from the use of DEET when applied in accordance with the recommendations of the manufacturer. Parents should choose the type and concentration of repellent to be used by taking into account the amount of time that a child will be outdoors, exposure to mosquitoes, and the risk of mosquito-transmitted disease in the area. Always follow the recommendation on the product label when using repellent. The following precautions should be taken:

- Do not allow young children to apply insect repellent themselves.
- When using repellent on a child, apply it to your own hands and then rub them on your child avoiding the eyes and mouth and using it sparingly around their ears.
- Do not apply repellent to children's hands.
- Keep insect repellents out of the reach of children.
- The American Academy of Pediatrics (AAP) has suggested using products with a low concentration of DEET, 30% or less, on children.
- The AAP and other experts suggest that it is acceptable to apply repellent with low concentrations of DEET to infants over 2 months old. Other guidelines cite that it is acceptable to use repellents containing DEET on children over 2 years of age.

## Is DEET safe for pregnant or nursing women?

According to the national Centers for Disease Control and Prevention (CDC), adverse events following use of repellents containing DEET in pregnant or breastfeeding women have not been reported. As a precaution, prior to handling infants, nursing mothers should wash repellents off their hands and areas of the breast that an infant may come into contact with.

# Are there any risks due to the use of repellents containing DEET?

Use of repellents that contain DEET may cause skin reactions, among other symptoms, in rare cases. If you suspect a reaction to the product, please contact your healthcare provider.

If you have any other questions about West Nile virus, please contact the Wyoming Department of Health, Preventive Health and Safety Division, Epidemiology Section at 1-877-WYOBITE. Alternatively, you can also find additional information on our website at (www.badskeeter.org).